Higgins eye

Lampsilis higginsi

Kingdom:	Animalia
Division/Phylum:	Mollusca
Class:	Bivalvia

Features

The shell of the Higgins eye mussel is rounded to slightly elongate, solid, and “inflated.” The anterior end is rounded. The posterior of males is bluntly pointed and that of females is squared. The dorsal margin is straight and the ventral margin is straight to slightly curved. The umbo (hump near the hinge) is turned forward and extends above the hinge line. The outside of the shell is smooth and yellow, yellowish green, or brown with green rays (may be obscure). The inside of the shell is white tinged with cream or salmon near the cavity by the hinge. It is iridescent toward the posterior end. The Higgins eye may reach lengths up to four inches.

Natural History

The Higgins eye is found in the Mississippi River and some of its northern tributaries in gravel or sand. It is federally endangered. Its distribution in Iowa is not well documented. Freshwater mussels have an elaborate reproductive system. During spawning, males release sperm into the water. The sperm are drawn inside the female's shell, where they fertilize eggs in her body. The fertilized eggs develop into larvae (glochidia) and are stored for a time in the female's gills. When the glochidia mature, the female generally expels them into the water where they must attach as parasites to the gills or fins of fish. Larvae remain on the host fish for a period of weeks or months. Young mussels then detach from their host and drop to the bottom of the body of water. Host fish for this mussel include sauger and freshwater drum. Mussels are filter-feeders, bringing in water and the organic matter it contains through the incurrent siphon, filtering the particles out, then sending the rest of the water away from the body through the excurrent siphon. Particles filtered include plankton and detritus. Mature mussels spend most of their lives, which range from 10 to 100 years, partially or wholly buried in the bottom substrate.

Habitats

Mississippi River

Iowa Status

federally endangered; native

Siltation and other unknown water quality impacts from changing land use have greatly impacted mussel populations. The exotic zebra mussel greatly stresses remaining native mussels by covering their shells and competing for food.

Iowa Range

Mississippi River pools 9-17 and possibly lower reaches of its large tributaries

Bibliography

Iowa Department of Natural Resources. 2001. *Biodiversity of Iowa: Aquatic Habitats* CD-ROM.